

### In The Specification

Please amend, by numbering the equations on page 12:

The equation of motion is

$$m \frac{d^2x}{dt^2} = -[k \bullet x] - \left[ A \bullet b \bullet \frac{dx}{dt} \right] \quad [\text{Equation 1}]$$

where  $k$  is the first order spring constant characterizing the cathode, and  $b$  is the parameter relating frictional force exerted by the solution upon the cathode to the velocity of said cathode. By Stokes' law, the parameter "b" is closely related both to the viscosity of the solution in the reactor and the size of the cathode perpendicular to the velocity of said cathode ("A").

The solution to the equation of motion is that of a damped sinusoid, with a natural angular frequency of a damped oscillator.

$$\omega = \omega_0 - \left[ \frac{b^2}{4m^2} \right] = \left[ \frac{k}{m} \right] - \left[ \frac{b^2}{4m^2} \right] \quad [\text{Equation 2}]$$

Please amend, by numbering the equations on page 13:

A 'Quality factor',  $Q$ , can be derived as  
where the expected natural frequency is:

$$\omega^2 = \omega_0^2 \bullet \left( 1 - \frac{1}{4 \bullet Q^2} \right) \quad [\text{Equation 3}]$$